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ABSTRACT

One of the most compelling arguments marshalled against the use of marijuana is that it will instill in the user an amotivational syndrome. A December 1970 Gallup Poll indicated that in a roughly random sample of college students, 42 percent had tried marijuana at least once, double the figure of spring 1969, and a figure that is terrifying indeed, if the amotivational syndrome is to be believed. Studies correlating college student use of illegal drugs and grades do not, however, support the amotivational syndrome view. A survey of six hundred students attending a deviance and delinquency class at Stony Brook indicated that 7 out of 10 had used amphetamines, and 4 percent had used heroin. The GPA's of the marijuana smokers and abstainers were roughly identical. There appeared to be a slight curvilinear relationship between drug use and grades. The highest grades seemed to be earned by the casual marijuana smoker, and the lowest grades by both the heaviest users of drugs, as well as the abstainer. Grades tended to dip with students heavily involved with drugs, with the heroin user having the lowest percentage of B average or better. Three variables: sex, class in college, and parents' socioeconomic status, were introduced and were found to have no effect on these findings. (AF)

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DRUG USE AND GRADES IN COLLEGE*

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"Drug Use and Grades in College"

by

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Of the many arguments marshalled against the use of illegal drugs, especially by the young, one of the most compelling in this most achievement-oriented of societies is that it will instill in the user an amotivational syndrome--apathy, lethargy, a lack of interest in achievement, a loss of motivation in the conventional sense. This argument is sometimes expanded to encompass lugubrious Götterdämmerungen which chronicle entire civilizations oozing into decadence, sloth and oblivion. The amotivational syndrome position, even when limited to less grandiose realms as the downfall of civilizations, remains a potent affidavit for keeping drugs relatively unavailable to today's young people, if it is logically and empirically valid. The contention rests on the following assumptions: (1) Drug use typically, or at least a large proportion of the time, becomes a routine affair; the user is under the influence of drugs much or most of his waking hours. (2) The drugs prohibited by law are, in fact, associated with a loss in motivation. (3) This underachievemnt oriented behavior is at least in part caused by the ingestion of the drug or drugs in question.

Critics of any given form of behavior tend to exaggerate its importance. Implicit in fear is that which is feared is a real and present threat, a threat to be guarded against. With drug use, the fear is that behavior defined by society as abnormal and undesirable will overwhelm and replace everything that is presently valued. Lurking behind this fear is what might be called the "stoned" image of drug use: that a significant portion of the user's waking hours will be consumed in and by drug intoxication.

The many studies of illegal drug use on the college campus indicate that the use of any drug, aside from marijuana, is typically extremely infrequent and, when it does occur, tends to be discontinued rather rapidly in the usual case. Even in college milieux wherein drug use is comparatively common, the percent of students even trying at least once any drug aside from marijuana is a small minority, and the percent using any of these drugs on anything like a regular basis is a minority of this figure. It is, of course, possible to locate one or another heroin addict, speed "freak," or "acid head," on any one of hundreds of college campuses across the country today, but epidemiological studies indicate that they are still part of an extremely limited--albeit problemmatic--segment of the undergraduate population. Marijuana is still the only illegal drug at present used by a portion of college students which even approaches a majority. (The only possible exception to this rule is the use of small dose amphetamine tablets or capsules during examination periods as an aid in studying.) The latest Gallup Poll, conducted December, 1970, indicated that in a roughly random sample of American college students, 42 percent had tried marijuana at least once.[1] The figure was 22 percent in the Spring of 1969[2]--almost a doubling in a year and eight months time--and 6 percent in Spring, 1967.[3] During all periods, liquor was still the most popular intoxicant. If the figure for marijuana [redacted] is anywhere near this 42 percent mark, and if the increase is even half of what the figures indicate, then, following the amotivational syndrome reasoning, there should be, indeed, cause for alarm. Could it be that marijuana is, as one observer speculated, our "new brain drain".[4] This is clearly a topic which necessitates empirical exploration.

During the months of January and February, 1970, I distributed a brief questionnaire to the roughly six hundred students attending my deviance and delinquency classes at the State University of New York at Stony Brook. The findings which follow are based, in large part, on this survey. Since these classes are not representative of the university of which they were a part, I regard these data as exploratory rather than definitive. One question which I asked was which drugs the students had used "to get high" on in the past six months, as well as how often. About seven students in ten had at least tried marijuana once or more times in the past six months. Roughly three students in ten had used an amphetamine once or more in the past six months, the next most popular drug. Heroin was one of the least often drugs used in the survey, with four percent of the students taking it at least once in the past six months. These figures are somewhat misleading, however; they tend to exaggerate the importance of all drugs aside from marijuana because, except for marijuana, all other drugs were used on an extremely episodic basis in the typical case. The drop-off rate was extremely sharp for all other drugs. Roughly 85 to 90 percent of all recorded episodes of drug use reported by the sample were with marijuana; thus, slightly over one instance in ten of illegal drug use involved the combined use of any and all drugs aside from marijuana. This means that it is extremely misleading to discuss all drug used on the campus with equal weight, as if they were all used with equal frequency. When we discuss campus drug use, we are discussing a phenomenon made up mainly--and very nearly exclusively--of marijuana use.

The median level of use of marijuana was 1.3 times per week. Since the average length of a marijuana "high," or intoxication, is about three or four hours, the typical user is under the

the influence of this drug roughly four or five hours per week, or about three or four percent of his waking hours. Thus, on the surface, it is difficult to imagine how a given drug, even one so relatively frequently used as marijuana, could generate a loss in motivation, given its relatively small space in the typical user's temporal life. Is it possible for a drug to continue generating apathy when the user is not under its influence? If these objections are sound, this means that a strictly biochemical thesis supporting the amotivational syndrome could not explain a lack of interest in achievement in the average user, if such obtains. On the other hand, following recent laboratory studies which indicate that there may be more long-range effects of marijuana's chemistry than are encapsuled within a single evening's occurrence of use,[5] it might be fruitful to examine and explore the empirical relationship between the use of marijuana particularly, and illegal drugs in general, and achievement. The most readily quantifiable such measure is scholastic achievement, or Grade Point Average, or simply GPA.

A close look at the studies correlating college student use of illegal drugs, and grades, does not support the amotivational syndrome view. The picture is considerably more complex. Of the various empirical studies relating differences in drug use to GPA, few show any remarkable differences. Pearlman's early study of Brooklyn College seniors[6], whose sample was gathered in 1965, showed that 24 percent of the students who had tried any drug claimed a B average or better, while the corresponding figure for those who had not tried any drug was 23 percent--a difference, obviously, representing no difference at all. When a sample of over 5,000 students was drawn from the entire City University

system (of which Brooklyn College is a part) and polled in 1968 by Pearlman and his associates in an as-yet unpublished study, again, tiny and trivial differences between current marijuana users and non-users were revealed; this was true for men and women separately. Richard Blum's data, collected in 1966 and 1967 in a wide range of California colleges, likewise revealed no differences in GPA between the two broad categories of users and non-users. [redacted] In fact, Blum's summary was a terse "we have no differences to report"; "students who use drugs," Blum concludes, "do not perform less well on any academic measure applied."[7]

A ten percent random sample of the undergraduate student body at the University of California at Los Angeles did not turn up any differences in GPA at all, aside from insignificant and random fluctuations; this held true for each class in college separately.[8] What distinguished this UCLA survey, conducted by two physicians at the school's Center for the Health Sciences, was that a check was made on the reported grades of a sub-sample of volunteers whose marijuana use profile was almost identical with that of the total sample. An extraordinarily close correspondence obtained between reported grades and grades recorded on the student's official transcript. In addition, this study separated out the non-user (who was somewhat idiocyncratically defined as someone who had used marijuana fewer than ten times in the past year, and therefore included the total abstainer, as well as the student who had smoked marijuana one to nine times in the past year) from the "occasional" user, and the "chronic" marijuana user. Again, GPAs for these three groups were almost identical; differences were tiny and insignificant.[9]

My own survey generally corroborated these findings, but with important qualifications. When I made the crude categorization between the total abstainer--the student who had never smoked marijuana, even once, in his entire lifetime--and the student who had at least tried marijuana, I found that their GPAs were almost identical. Thirty-two percent of the marijuana experimenters had a 3.0 (or straight "B" average) GPA or better, and 33 percent of the total abstainers had this high an average. These figures are presented in Table 1.

[Table 1 about here]

A more detailed break-down of users, however, yields an interesting relationship not tapped by the above gross dichotomization between the user and the non-user. Taking the amount of marijuana used, on the average, in the past six months, as a rough index of the student's degree of involvement with drugs and the drug subculture, there appeared to be something of a slight curvilinear relationship between drug use and grades. That is, the highest grades seemed to be earned by the casual and infrequent marijuana smoker, and the lowest GPAs by both the heaviest user, as well as the complete abstainer. These differences are not dramatic or striking, but they are regular--as well as intriguing. Only 29 percent of the daily marijuana smokers had achieved a 3.0 or better, and 31 percent of the complete abstainers did as well. But 45 percent of the three or four times a month users, and 47 percent of the one or two times a month users, had this high an average. These differences may not mean very much, but they do cast some doubt on the automatic amotivational syndrome in any case. These figures appear in Table 2.

[Table 2 about here]

When we turn to the number of drugs the student has experimented with at least once in his lifetime[10] as another indicator of drug involvement, what emerges is that there is no difference in GPA between the complete abstainer and the student who has tried between one and three drugs; their grades are almost exactly the same. But grades begin to dip when we examine the student who has tried four or more drugs. There are about ten percent fewer students with a "B" average or better among the four or more drug experimenters. Table 3 documents this relationship.

[Table 3 about here]

This finding is paralleled by another index of drug involvement--the specific drug the student has experimented with. Taking each drug separately, it is clear that heroin experimenters (those students who have at least tried heroin one or more in their lives, a category which includes addicts as well as once-only experimenters) have the lowest percentage of any group with a 3.0 or better: 12 percent. It was 32 percent for the total sample, 32 percent for the no drug triers, or total abstainers, and 32 percent for marijuana triers.[11] Students who had at least experimented with cocaine and methedrine also contained a low percentage of those with a "B" average or better: 17 percent. Thus, experimentation specifically with those drugs whose use indicates a comparatively close degree of involvement with drugs and the drug subculture, is associated with low grades. At least some minimal degree of involvement with that drug whose use is most wide-spread, and whose use indicates very little as regards the student's involvement with drugs in general, [redacted] appears to have no impact at all on GPA. Nearly all heroin experimenters had tried a

[Table 4 about here]

a wide range of other drugs as well, as was true of nearly all cocaine and methedrine-triers, too. However, marijuana users represented the broad spectrum in involvement with other drugs, from none whatsoever to nearly all available drugs, and so they represent the broad spectrum as regards grades as well. Marijuana users as a whole appear to have average grades.

I was interested in whether any of these relationships and findings could be mitigated, strengthened or in any way transformed, by the introduction of additional, prior, "control" variables. The three which I selected were sex, class in college, and socio-economic status of the student's parents. The question is, what is the association between drug use and grades, independently for men and women, independently for students at different stages in their college careers, and independently for students whose fathers had professional and executive (or "upper-middle class") occupations, or clerical and sales (or "lower-middle class") occupations, or manual (or "working class") occupations. I divided my respondents into three groups along the dimension of drug use, adopting marijuana use in the past six months as a fairly accurate reflection of drug involvement: those who have never smoked marijuana at all in the past six months (our complete abstainers); those who have smoked less than weekly, but at least once; and those who have smoked marijuana weekly or more in the past six months. What these three-variable tests demonstrated was that the orginal slight curvilinear relationship between marijuana use and GPA appeared to hold up independently for various groups and social categories. The break in grades came at the weekly or more point. If the student smoked marijuana less than weekly, his grades turned out to be slightly higher than average; if he smoked marijuana weekly or more, they were slighlty below average--with the abstainer

having roughly average grades. This held true regardless of whether the students in question were men or women, juniors and seniors, or sophomores and freshmen, or stemmed from an "upper-middle" status home, or a manual laboring class home. Tables five through seven explore these differences.

[Tables 5 through 7 about here]

Naturally, GPAs varied across these categories. Women had markedly higher grades than men. Students whose fathers worked at professional and executive occupations had significantly higher grades than students whose fathers were manual laborers. But within each category, and for each category separately, almost precisely the same tendency was evident. For all of the categories in these three three-variable tests, in every case, the less than weekly marijuana user had a higher percentage of students with a "B" average or higher than did the abstainer--and the difference was an average of just over seven percentage points more; the abstainer was in every case except one more likely to have a higher percentage with a "B" average or better--and the difference was just under seven percentage points more. Although these differences are not remarkably large, they are stable, and they are almost without exception.

It is much easier to find out what the facts are than to know what they mean. Even if there were dramatic differences between users and non-users in GPA, it still would not be possible, with the data on hand, to impute causality to the relationship. Would such differences indicate a chemical basis for the amotivational syndrome, for the generation of apathy? And does an absence of such differences indicate no such causal sequence? Does the fact that, in our sample at least, the daily marijuana user is a lower

academic achiever than the rest of the sample indicate that the drug is inhibitory to academic achievement? Does the fact that the infrequent marijuana user has higher grades, on the average, destroy the entire amotivational syndrome reasoning? My data cannot answer any of these questions. My speculation would be that drug use, per se, has little or nothing to do, intrinsically, with conventional achievement, and that, aside from alcohol and probably the barbiturates, the frequent and chronic use of possibly no drug is inherently linked with a powerful inhibition of the desire to achieve. The long-term use of and addiction to narcotics, such as meperidine by physicians, suggests that in and of themselves, the effects of narcotic drugs do not inevitably lead to a dramatic decline in the will and the ability to conduct achievement-oriented behavior. What appears to be more certain is that drug use, especially at the upper levels of use-frequency, as well as the use of specificall certain drugs, such as heroin, is a rough index of the individual user's degree of involement with a drug-using subculture whose values include a disdain for hard work, for grades, for many of the traditional measures of achievement, as well as for much course work in college--in fact, a certain degree of disinterest in, and even a kind of condescending contempt for, college and university life in general, as it has been traditionally conceived. Although drug use will often be one of the points of common interest within such groups, in actuality, drugs themselves have little or nothing to do with this attitude, nor with its attendant nonachieving behavior pattern. The more that a student uses drugs, the greater is the likelihood that a high proportion of his friends also use drugs, and the higher their use of drugs is likely to be. In other words, with increasing use, the kinds of friends one has will tend to change. Drug use implies a certain degree of absorption into a

a distinct value and behavioral milieu. The fact that one uses drugs, especially at certain levels and frequencies, almost implies that one's friends--and hence oneself--will have certain attitudes and practice certain forms of behavior. By this fact alone, even ignoring the pharmacological effect of drugs, we would expect differences in GPA along drug use lines. The cultural impact appears to me to be potent, beyond any drug's actual chemical and bodily effects. All of this is, in any case, a matter for more careful investigation.

Another issue which this analysis cannot answer is whether a consideration of variables prior to both drug use and grades, but which are at the same time correlated meaningfully with both, might yield interesting relationships. It is entirely possible that the very students who use drugs are a preselected group as to academic potential, and their drug use actually lowers their academic performance--the possibility of fulfilling that potential--down to the level of their less talented non-drug-using peers. Thus, drug use might conceivably contribute to their amotivational behavior, to some degree, without that fact becoming readily apparent. In any case, this issue is beyond the scope of this modest paper. Its resolution awaits a more systematic and detailed analysis.

Footnotes

[1]George Gallup, Accelerating Drug Use, The Washington Post, G2, January 17, 1971.

[2]American Institute of Public Opinion, Special Report on the Attitudes of College Students (Princeton, N.J.: AIPO, June, 1969), Report no.48.

[3]American Institute of Public Opinion, Views of College Students on Drug Taking, unpublished manuscript (Princeton, N.J.: AIPO, June, 1967).

[4]Henry Brill, Why Not Pot Now? Some Questions and Answers About Marijuana, Psychiatric Opinion, 5: 16-21, October, 1968.

[5]Louis Lemberger, et al., Marijuana: Studies on the Disposition and Metabolism of Delta-9-Tetrahydrocannabinol in Man, Science, 170: 1320-1322, December 18, 1970.

[6]Samuel Pearlman, Drug Use and Experience in an Urban College Population, American Journal of Orthopsychiatry, 38: 503-514, April, 1968.

[7]Richard Blum and Associates, Students and Drugs (San Francisco: Jossey-Bass, 1969): 225, 226.

[8]Joel Simon Hochman and Norman Q. Brill, Marijuana Use and Psychosocial Adaptation, unpublished manuscript, forthcoming.

[9]None of these surveys, my own included, tabulated the GPA of the student during the period of drug use only; all are a cumulative over-all GPA. A period-specific tabulation might be a more valid figure, although more difficult to obtain, but there are

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methodological problems with that as well. One is that the students' drug use fluctuates considerably, and does not conform neatly to semester-by-semester periods. All things considered, however, the semester-specific GPA and drug use, tabulated together, would represent an advance in methodological sophistication beyond what presently available studies have reported.

[10]The following drugs, or groups of drugs, were counted as one drug experimented with: marijuana and hashish; any or all of the amphetamines; methedrine; the barbiturates and the tranquillizers; heroin; LSD; DMT and/or DET; psilocybin; mescaline or peyote; opium; cocaine; etc. Any student who had tried any of the more infrequently-used and exotic drugs invariably turned out to be in the four or more drugs tried category.

[11]It will be seen that the exact percentages in each category vary slightly from table to table. Table 1 is based on whether the student had "ever" used marijuana; table 2 is based on whether the student had used marijuana <u>in the past six months</u>, and how often; table 3 is based on the number of drugs ever tried--nearly all of those who were recorded to have tried one only had tried marijuana, but a few had used the amphetamines, but not marijuana. Thus, each table taps a very slightly different and shifting population, and thus, the figures will not correspond exactly to one another. [redacted]

[redacted]

Table 1

GPA by Marijuana Experimentation

Marijuana Experimentation:	3.0 or higher	2.5 to 2.9	under 2.5	Total Percent	N
At Least Once	32	40	28	100	360
Never	33	43	24	100	144

Table 2

GPA by Frequency of Smoking Marijuana in the Past Six Months

	3.0 or higher	2.5 to 2.9	under 2.5	Total Percent	N
Every Day	29	35	35	99	31
3-6#/week	24	40	36	100	58
1-2#/week	23	43	34	100	88
3-4#/month	45	27	27	99	51
1-2#/month	47	32	21	100	57
Less Than Once Per Month	31	50	19	100	48
Never	31	43	25	99	157

Table 3

GPA by Number of Drugs Ever Tried (or "Experimented" With)

	3.0 or higher	2.5 to 2.9	under 2.5	Total Percent	N
0	32	44	24	100	140
1	36	39	26	101	160
2 or 3	35	42	24	101	110
4 or more	24	37	39	100	103

Table 4

GPA by Ever Tried Various Drugs at Least Once

	3.0 or higher	2.5 to 2.9	under 2.5	Total Percent	N
Over-all average	32	41	27	100	561
Non-drug average	32	44	24	100	140
Marijuana	32	40	28	100	360
Opium	31	47	22	100	36
Mescaline	29	38	33	100	115
Amphetamines	28	39	34	101	116
DMT or DET	28	44	28	100	18
LSD	22	40	39	101	96
Barbiturates	22	41	36	99	58
Cocaine	17	62	21	100	29
Methedrine	17	33	31	101	36
Heroin	12	65	24	101	17

Table 5

GPA by Marijuana Use in Past Six Months, Holding Sex Constant

Men

	3.0 or higher	2.5 to 2.9	under 2.5	Total Percent	N
Never	21	42	37	100	62
Less Than Weekly	31	40	29	100	80
Weekly or More	15	44	41	100	111

Women

	3.0 or higher	2.5 to 2.9	under 2.5	Total Percent	N
Never	39	43	18	100	95
Less Than Weekly	47	37	15	99	99
Weekly or More	41	37	22	100	63

Table 6

GPA by Marijuana Use in Past Six Months, Holding Class in College Constant

Juniors and Seniors

	3.0 or higher	2.5 to 2.9	under 2.5	Total Percent	N
Never	35	45	21	101	78
Less Than Weekly	39	40	21	100	98
Weekly or More	22	47	31	100	68

Freshmen and Sophomores

	3.0 or higher	2.5 to 2.9	under 2.5	Total Percent	N
Never	30	44	26	100	73
Less Than Weekly	42	37	22	101	79
Weekly or More	26	36	37	99	107

Table 7

GPA by Marijuana Use in Past Six Months, Holding Father's Occupation Constant

Professonal and Executive

	3.0 or higher	2.5 to 2.9	under 2.5	Total Percent	N
Never	39	39	22	100	54
Less Than Weekly	53	35	12	100	66
Weekly or More	31	36	34	101	59

Sales and Clerical

	3.0 or higher	2.5 to 2.9	under 2.5	Total Percent	N
Never	31	40	29	100	52
Less Than Weekly	38	40	22	100	63
Weekly or More	23	42	35	100	77

Manual Labor

	3.0 or higher	2.5 or 2.9	under 2.5	Total Percent	N
Never	26	48	26	100	46
Less Than Weekly	28	35	38	101	40
Weekly or More	17	44	39	100	36